

What is a scale?

This is really is a much simpler question than you think.

By definition, a scale is simply a means of dividing up an octave.

Historically, the language of music is Italian – hence nice terms like tempo, forte, poco a poco, allegro, etc.

In Italian we also have nice words like “scaletta” and “scale” which mean “ladder” and “stairs” respectively.

The music terms, “scale” has its origins from these Italian words that try to describe the notes within a scale as being like the steps of a flight of stairs, or the rungs of a ladder.

Try to imagine a flight of stairs where there are 12 steps from bottom to top.

The starting point at the bottom is called the “tonic”.

The very top [12th step] is called the “octave”.

Our imaginary flight of stairs has a name too and is called the “Chromatic Scale”.

This simply means that it includes every single step that there is.

The “interval” [or distance] between each step in our chromatic scale is a semi-tone.

On a guitar, this is the difference between one fret and the next and is the smallest step between one note and another.

On a piano this is the difference between one piano key and the next.

If you measure the distance between each step in the chromatic scale and the tonic in terms of semi-tones, you can give each of them a name. Tutorial: 1 intervals, shows how to name each interval based upon the number of semi-tones between them.

The best place to start understanding scales is to take a look at the “diatonic major scale”.

Consider this scale as being the “mother” or birthing place for pretty much all other scale, and so the major scale is generally used as a reference to which most other scales are compared.

The Major Scale

The object of this tutorial is to find the notes that make up a major scale by working them out from a given ‘tonic’.

First a few simple rules:

1 - the letters that represent each degree [each note] of the scale can only be used once there can only be one ‘A’, one ‘B’, one ‘C’, one ‘D’, one ‘E’, one ‘F’ and one ‘G’

2 - they will always occur in alphabetical order until you get to the note ‘G’ [where the following note is ‘A’]

3 - You will also need to know the notes of the chromatic scale so here they are.

Use them for reference:

A, A#/Bb, C, C#/Db, D, D#/Eb, E, F, F#/Gb, G, G#/Ab, A, and so on

Note that A# and Bb are the same pitch [as in, this pitch appears on the same physical key on a piano or same string and fret number on a guitar] but they are not the same note. They are merely two different names for the same pitch.

Also, you need to know the ‘spelling’ of a major scale:

The ‘spelling’ is simply the list of intervals with respect to the tonic

– the tonic is the name for the first note in the scale.

The spelling for the major scale is shown below along with the fret position where the tonic is an open string so that you can play and hear it:

Tonic [the first note - where you start from]

Major 2nd [2 frets up from the tonic]

Major 3rd [4 frets up from the tonic]

Perfect 4th [5 frets up from the tonic]

Perfect 5th [7 frets up from the tonic]

Major 6th [9 frets up from the tonic]

Major 7th [11 frets up from the tonic]

Octave [12 frets up from the tonic]

When working out the notes that make up a scale, you need to list out all 7 notes in order from the tonic. So for example, if the tonic was C, the list of note values would be C, D, E, F, G, A, B.

Next you need to figure out if the notes are flat [b], natural, or sharp [#]

To do this you use the spelling of the scale, your knowledge of intervals and the list of chromatic notes.

The 2nd note is a major 2nd interval above C [1 tone or 2 frets above the tonic]

Two semi-tones above C [found by looking at the chromatic scale] is D

'C' is the starting point

one semi-tone up is 'C#/Db'

another semi-tone up is 'D'

The 3rd note is a major 3rd interval above C [2 tones or 4 frets above the tonic]

Two tones above C [found by looking at the chromatic scale] is E

'C' is the starting point

one semi-tone up is 'C#/Db'

one tone above C is 'D'

one and a half tones above C is 'D#/Eb'

two tones above C is E

if you follow this method through to end, looking at all intervals of the major scale where C is the tonic

you will end up with C, D, E, F, G, A, B, C

Lets look at a major scale where E is the tonic - the scale of E major

When the Tonic = E the order of the notes of this scale will be E, F, G, A, B, C, D

but we do not yet know if there are any # or b notes. We need to work them out as we did for C major [above]

The 2nd note is F 'something' and is a major 2nd interval above the E [1 tone or 2 frets above the tonic]

'E' is the starting point

one semi-tone up is 'F'

another semi-tone up is 'F#/Gb' - which do you choose? F# or Gb?

Remember that all the notes have to be in alphabetical order and occur only once

F comes after E so you choose the F#

The 3rd note is G 'something' and is a major 3rd interval above the E [2 tones or 4 frets above the tonic]

'E' is the starting point

one semi-tone up is 'F'

another semi-tone up is 'F#/Gb' - which turned out to be F#

The next is G

And the next is G#/Ab

We already have E, F#, and we are looking for G something and have G#/Ab to choose from

So it has to be G#

Try to work out the rest of the scale for yourself

If you get stuck that's ok. Contact me and I can show you where you are going wrong and why.

It's much better that you start figuring this out yourself and me nudging you in the right direction rather than me spoon feeding you list after list of scales and you never understanding why

If you think you have the hang of it, try working out the notes in 'F major', 'A major', Bb major and C# major.

Don't worry about getting it wrong

It's all part of the learning process